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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/733,760

12/12/2003

John Charles Calhoon

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EXAMINER

BERHANU, SAMUEL

ART UNIT

PAPER NUMBER

2838

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/733,760

Applicant(s)

CALHOON ET AL.

Examiner

Samuel Berhanu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 and 28-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 and 28-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 8, 10 and 11 are rejected under 35 U.S.C. 1032(b) as being anticipated by Parks et al. (US 5,455,466).

Regarding Claim 8, Parks et al disclose a battery pack configured for receiving inductive energy for charging (200b) comprising: a processor unit (228) for processing computer readable data relevant to receiving the inductive energy and for processing data communication with a computer system; a pick up coil (200b) configured for receiving the inductive energy and for receiving an inductive data communication; a charger operatively coupled to the processor unit and the pick up coil (224); the charger configured to output a direct current powered by the inductive energy (222); and relevant to the inductive data communication (the inductive link is used to transfer data and power (see abstract and Column 2, lines 58-65) ; an energy storage unit (225) configured for receiving the direct current (column 3, lines 50-60, Column 3, lines 65-67, Column 4, lines 19-50).

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Regarding Claim 10, Parks et al. disclose the battery pack comprising a communications device (220) operatively coupled to the pickup coil (220).

Regarding Claim 11, Parks et al. disclose the battery pack in which the communications device (220) is configured to receive the computer readable data and transmit the data to the pick up coil (200b).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 8-10, 12-13 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Lyon (US 2004/0145342).

Regarding Claim 8, Lyon discloses in Figures 1 and 2, a battery pack (234) configured for receiving inductive energy for charging (232) comprising: a processor unit (248) for processing computer readable data relevant to receiving the inductive energy and for processing data communication with a computer system; a pick up coil (232) configured for receiving the inductive energy and for receiving an inductive data communication (Paragraphs 0023); a charger (230) operatively coupled to the processor unit and the pick up coil ; the charger configured to output a direct current powered by the inductive energy (222); and

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relevant to the inductive data communication; an energy storage unit (234) configured for receiving the direct current (Paragraphs 0023-0030).

Regarding Claim 9, Lyon discloses in Figure 2, the step of transmitting includes a step of transmitting authenticating data to charging source (paragraph 027, 0029, 0033). Regarding Claim 10, Lyon discloses in Figures 1 and 2, the battery pack comprising a communications device (242) operatively coupled to the pickup coil (232).

Regarding Claim 10, Lyon discloses in Figure 2, the battery pack comprising a communications device (242) operatively coupled to the pickup coil (232).

Regarding Claim 12, Lyon discloses in Figure 2, the processor unit (240) is configured to provide a plurality of charging parameters to a charging source, which provides the inductive energy (Paragraphs 0025)

Regarding Claim 13, Lyon discloses in Figure 2, the processor unit is configured to provide a digital security certificate to a charging source (Sending an RFID tag, Paragraphs 0032-0033).

Regarding Claim 15, Lyon discloses in Figure 2, the an antenna (232) and a communications device (242) configured to receive the computer readable data and configured to transmit the data to the antenna for wireless data communications a charging source (paragraphs 0023 and 0032-0033)).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-7 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyon (US 2004/0145342) in view of Gosior et al. (US 2002/0159434).

Regarding Claim 1, Lyon discloses in Figures 1 and 2, an apparatus (106) for transmitting inductive energy to a battery pack (204), the battery pack including a microprocessor (240) for processing data relevant to the inductive energy, the apparatus comprising: a memory (216) for storing computer readable instructions relevant to charging a battery pack (Paragraphs 0018, 0020); a processor unit (218) operatively coupled to the memory; and a transmission element (212, 243, noted that both the coil and the communication ports can be used as a transmission element, see paragraph 0023) operatively coupled to the processor so as to provide the inductive energy to the battery pack, and to provide inductive data communications to the battery pack (paragraph 0023). However, Lyon does not disclose explicitly, data communications to the battery pack based on a polling message having a data communications to the battery pack based on a polling message having a header and a payload. However, Gosior et al. disclose in Figure 8, data communications to the battery pack based on a polling message having a data communications to the battery pack based on a polling message having a header and a payload (Paragraphs 0122). It would have been obvious to a person having ordinary skill in the art at the time of

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the invention to use a polling message that contains a payload, and a header as taught by Gosior et al. in Lyon's adaptive charger system and method in order to provide an efficient and reliable data transfer means for the charger and the device or the battery pack.

Regarding Claim 2, Lyon discloses in Figures 2 and 4, the apparatus in which the memory includes authentication data (LUT) for authenticating the (the memory contains a look up table that verifies or set the charging parameters) battery pack for the inductive energy transmission (Paragraphs 0032, 0033)

Regarding Claim 3, Lyon discloses in Figures 1 and 2, a communications device (210 to 212 and 243) for receiving and transmitting data (paragraphs 0023) and the communications device being operatively coupled to the transmission element (220, communication channel)

Regarding Claim 4, Lyon discloses in Figures 1 and 2, an apparatus further comprising an antenna (210 to 212) and a communications device (243) configured to receive the computer readable instructions and configured to transmit the instructions to the antenna for wireless data communications to a battery pack (the inductive coils or the communication ports are designed to transmit signals and receive signals related to the charging process, Paragraphs 0023-0025).

Regarding Claim 5, Lyon discloses in Figures 1 and 2, a processor unit (218) is configured to receive a plurality of charging parameters from the battery pack (Paragraphs 0025).

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Regarding Claim 6, Lyon discloses in Figures 1 and 2a processor unit (218) is configured to receive a digital security certificate from a battery pack (noted that a data from the device is transmitted to the charger, then the charger reads the data and determine the optimal charging parameters)

Regarding Claim 7, Lyon discloses in Figures 1 and 2, an apparatus comprising a plurality of transmission elements (210 to 212, and 243) each configured to operate independently of each other.

Regarding Claim 28, Lyon does not disclose explicitly, the inductive data communication includes a polling message including a header and a payload. Gosior et al. disclose, the inductive data communication includes a polling message including a header and a payload. It would have been obvious to a person having ordinary skill in the art at the time of the invention to use a polling message that contains a payload, and a header as taught by Gosior et al. in Lyon's adaptive charger system and method in order to provide an efficient and reliable data transfer means for the charger and the device or the battery pack.

Regarding Claim 29, Lyon discloses, wherein the payload includes at least one of an operating parameter and authentication information (Paragraphs 0033).

Regarding Claim 30, Lyon disclose wherein the operating parameter corresponds to a charging voltage or a maximum expected power consumption (Paragraphs 0033).

7. Claims 9, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parks et al. (US 5,455,466) in view of Stobbe (US 6,275,143).

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Regarding Claim 9, Parks et al. do not disclose, the processor unit is configured to provide authentication data for inductive energy charging. However, Stobbe discloses the apparatus in which the memory includes authentication data for authenticating the battery pack for the inductive energy transmission (Column 6, lines 5-20). It would have been obvious to a person having ordinary skill in the art at the time of the invention to implement authentication data transfer means in Parks et al. inductive coupling system as taught by Stobbe in order to protect against unintentional or unwanted battery charging.

Regarding Claim 13, Stobbe discloses the processor unit is configured to provide a digital security certificate to a charging source (Column 6, lines 5-20).

Regarding Claim 15, Stobbe discloses the an antenna (52) and a communications device (22,24) configured to receive the computer readable data and configured to transmit the data to the antenna for wireless data communications a charging source (Column 5, lines 35-45).

8. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Parks et al. (US 5,455,466) in view of Garcia et al. (US 5,963,012).

Regarding Claim 12, Parks et al. disclose the claimed invention, except the processor unit is configured to provide a plurality of charging parameters to a charging source which provides the inductive energy. However, Garcia et al. disclose the processor unit is configured to provide a plurality of charging parameters to a charging source, which provides the inductive energy. It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify Parks et al. inductive coupling system in order to transmit

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battery parameters as taught by Garcia et al. so that the device can make any necessary charging adjustments.

9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Parks et al. (US 5,455,466) in view of Higuchi et al. (US 6,163,132).

Regarding Claim 14, Parks et al. do not disclose, the processor unit is configured to send data to the computer system so as to indicate it is receiving inductive energy. However, Higuchi discloses in Figure 1 the processor unit (4b) is configured to send data to the computer system (5) so as to indicate it is receiving inductive energy (Column 4, lines 33-38). It would have been obvious to a person having ordinary skill in the art at the time of the invention to add a computing and indicating system to the battery pack in Parks et al. as taught by Higuchi et al. in order to monitor battery status.

10. Claims 16-19 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyon (US 2004/0145342) in view of in view of Gosior et al. (US 2002/0159434).

Regarding Claims 16 and 22, Lyon discloses in Figure 2, a computer implemented method of charging battery pack, comprising the step of: receiving a polling message (receiving a command) from a charging source (Paragraph 0025)); the polling message including a data structure having a header and a payload transmitting a request for power to the charging source (; responsive to the polling message (paragraph 0027); and receiving inductive power or an inductive data communication (242, 243) from the charging source responsive to the transmitted request (Paragraph 0027, 0029, 0032, 0033). Lyon does not

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disclose the polling message including a data structure having a header and a payload. However, Gosior et al. disclose in Figure 8, data communications to the battery pack based on a polling message having a data communications to the battery pack based on a polling message having a header and a payload (Paragraphs 0122). It would have been obvious to a person having ordinary skill in the art at the time of the invention to use a polling message that contains a payload, and a header as taught by Gosior et al. in Lyon's adaptive charger system and method in order to provide an efficient and reliable data transfer means for the charger and the device or the battery pack.

Regarding Claims 17 and 23, Lyon discloses in Figure 2, the step of transmitting includes a step of transmitting charging parameters to the charging source (paragraph 027).

Regarding Claims 18 and 24, Lyon discloses in Figure 2, the step of transmitting includes a step of transmitting authenticating data (a device information data) to charging source (paragraph 027 and 0033)

Regarding Claim 19, Lyon discloses in Figure 2, a step of initiating a charger responsive to the step of receiving ((paragraph 027).

11. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyon (US 2004/0145342) in view of Gosior et al. (US 2002/0159434) as applied to claim 16 above, and further in view of Higuchi et al. (US 6,163,132)

Regarding Claim 20, neither Lyon nor Gosior et al. disclose a step of transmitting data to a computer system for indicating the step of receiving

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inductive power. However, Higuchi et al disclose in Figures 1 and 2 a step of transmitting data to a computer system for indicating the step of receiving inductive power (Column 4, lines 33-38). It would have been obvious to a person having ordinary skill in the art at the time of the invention to add a computing and indicating system to the battery pack in Lyon's adaptive charger system and method as taught by Higuchi et al. in order to monitor battery status.

Regarding Claim 21, Higuchi et al disclose in Figure 3 a step of displaying an object on a graphical user interface (6) indicative of the step of receiving (Column 4, lines 60-63).

Response to Arguments

12. Applicant's arguments filed 9/16/2005 have been fully considered but they are not persuasive, or moot in view of the new ground(s) of rejection

Applicant argues that Parks does not teach or suggest an inductive data communication or a pick up coil configured for receiving the inductive data communication and outputting a direct current powered by the inductive energy and relevant to the inductive data communication. This is not correct.

Parks discloses in Figure 2 that a pick up coil (200b) which receives inductive signal or data from the charging coil (200a), the inductive link is used to transfer data and power (see abstract and Column 2, lines 58-65). Parks also teaches that the signals induced by the secondary winding is inputted to the rectifier circuit and the charging circuit to charge the secondary battery (Column 4, lines 27-50)

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel Berhanu whose telephone number is 571-272-8430. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl Easthom can be reached on 571-272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SB


KARL EASTHOM
SUPERVISORY PATENT EXAMINER